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A CARTOGRAPHIC CITY DATA BANK.(U)
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The Defense Mapping Agency Hydrographic/Topographic Center (DMAHTC) is currently in the process of formulating a City Data Bank which will include the city name, location, and population for all cities with a population greater than 50,000. The data bank will supplement the World Data Bank II Area Files. The main purpose of the City Data Bank will be to generate annotated plots of city locations. This paper outlines the development of the data bank, its structure, and application.

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A CARTOGRAPHIC CITY DATA BANK

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Washington, D.C. 20315

BIOGRAPHICAL SKETCH

Mary G. Clawson is a cartographer with the Defense Mapping Agency Hydrographic/Topographic Center. Her research interests include automated cartography and the history of cartography. Ms. Clawson holds a B.S. degree in Geography from Towson State College and a M.S. degree in Geography from the University of Maryland. She is a member of the American Congress on Surveying and Mapping, the Canadian Cartographic Association, and the National Computer Graphics Association. She is currently serving as an officer for the Cartography Division of ACSM and the National Computer Graphics Association.

ABSTRACT

The Defense Mapping Agency Hydrographic/Topographic Center (DMAHTC) is currently in the process of formulating a City Data Bank which will include the city name, location, and population for all cities with a population greater than 50,000. The data bank will supplement the World Data Bank II Area Files. The main purpose of the City Data Bank will be to generate annotated plots of city locations. This paper outlines the development of the data bank, its structure, and application.

INTRODUCTION

To increase its automated mapping capabilities, the Defense Mapping Agency Hydrographic/Topographic Center is currently in the process of formulating a City Data Bank. The main purpose of the City Data Bank will be to generate annotated plots of city locations. The City Data Bank is designed to be compatible with the World Data Bank II Area Files produced by the Central Intelligence Agency.

The City Data Bank will contain all cities with a population greater than 50,000. It will also include country capitals and the port cities of a large and medium size even if the population of that city is less than 50,000. For each city in the data base, the following information will be recorded: city name, geographic location, population, city type, country code, and diacritic code.

DATA SOURCES AND FILE STRUCTURE

The sources used to compile the information in the data base include atlases and gazetteers. For the most part the population figures are 1970 census figures as published in atlas sources. The geographic coordinates for the cities are from gazetteers. Country capitals, state or province capitals and port cities will be identified. Each city will also have a designated country code. Since the file will not contain diacritics, a special code will indicate whether diacritics must be added to complete the city name.

The data base is structured to be accessed through the Individual Point Feature Program. The information for each entry is recorded on a disc file in card image format as follows:

COLUMN	FIELD OF DATA
1-2	card code
3-13	latitude of city
14-25	longitude of city
28-49	city name
50-57	population
60	city type
61-63	country code
65	diacritic code

Through the use of the Individual Point Feature Program the cartographer will be able to plot the cities in the file for a given geographic area, on any of 26 projections. The cartographer will also have the option of plotting only those cities within a specific population range or only country capitals or port cities. The cartographer can also indicate the annotation height, pen code or line weight and whether the city location is to be shown as a crosstick or a circle. The capability to rotate the annotation is also an option of the program. Figure 1 shows a sample map produced with the City Data Bank and World Data Bank II files.

CONCLUSION

The City Data Bank currently includes approximately 3,000 cities. Each city is located by geographic coordinates which are accurate to the nearest minute. The city file can easily be updated to make additions, change population figures or increase the accuracy of the location by recording the geographic coordinates to the nearest second.

Approximately 30 percent of the cities in the file have been edited through proof plots and verified with existing map sheets for city location. Additional editing and updating of population figures is still in progress.

The addition of a City Data Bank to the Defense Mapping Agency Hydrographic/Topographic Center will increase the Center's ability to respond in a timely fashion to user requirements.
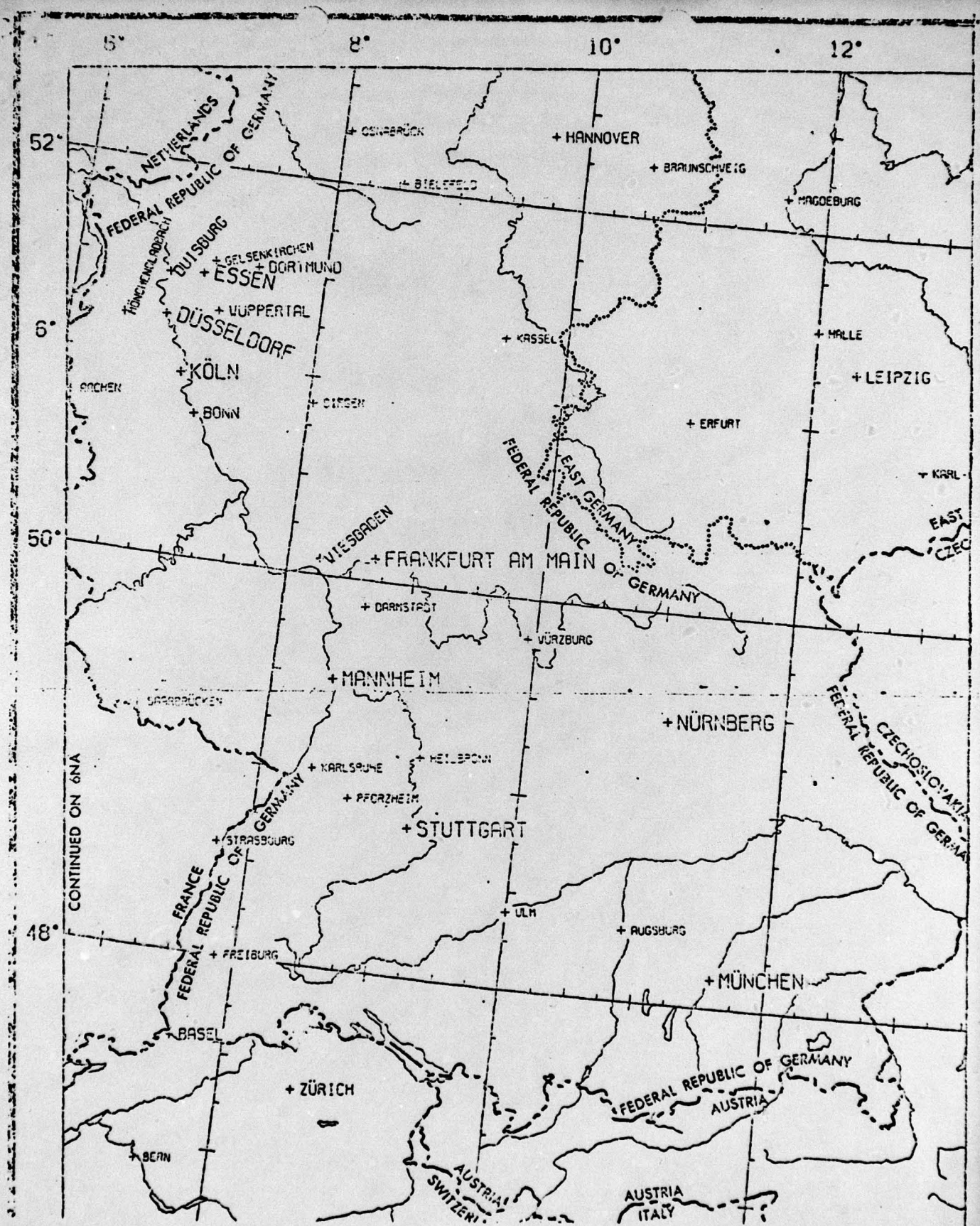
Figure 1. Sample map using the City Data Bank